

# PATENT SPECIFICATION



Application Date: Aug. 20, 1923. No. 21,110/23. **218,147**

Complete Left: March 25, 1924.

Complete Accepted: July 3, 1924.

## PROVISIONAL SPECIFICATION.

### Improvements in or relating to Wheels of Vehicles.

I, ARTHUR BENNETT TAYLOR, British subject, of Northover, Dartmouth Park Avenue, London, N.W. 5, do hereby declare the nature of this invention to be as follows:—

This invention relates to wheels of vehicles, and more particularly to wheels which are adapted to run either on rails or road surfaces.

A wheel made in accordance with this invention is provided with a rim formed in segments adapted in one position to form a flange which projects beyond the tread when the wheel is to be used on rails, said rim being retracted or moved so as not to touch the surface of the road where the wheel is used on a road surface.

Referring to the drawings filed herewith:—

Fig. 1 is an elevation of one form of wheel made in accordance with this invention;

Fig. 2 is a section shewing the rim in a position when the wheel is for use on rails;

Fig. 3 is a section shewing the rim in a retracted position when the wheel is for use on a road surface.

Fig. 4 is a section of a modified construction shewing the rim in the position required to use the wheel on a road surface.

Referring to Figs. 1, 2 and 3, the wheel

*a* is provided with a tread *b* of rubber or other suitable material; *c c*, *d d* are segments which form a flange; *e* is a locking band, and *f f* are bolts. When it is desired to retract the flange so as not to touch the road surface, the bolts *f f* are slackened, the segments *c c* are moved laterally so as to permit all the segments being moved inwardly. When this has been done the bolts are tightened.

In the position shewn in Fig. 2 the locking band *e* keeps the segments in the extended position.

In the form shewn in Fig. 4 the segments are hinged, alternate sections being hinged at a different distance from the centre of the wheel so as to permit their being moved to positions which will prevent their touching the road surface when used upon a road.

When it is desired to use the wheel on a rail, the segments are placed in a position to project and form a flange and are securely locked in position.

The projecting flange could be used on sandy or other surfaces when additional adhesion is required and for that purpose the edge could be serrated or otherwise modified.

Dated this 20th day of August, 1923.

MEWBURN, ELLIS & Co.,  
70—72, Chancery Lane, London, W.C. 2, Chartered Patent Agents.

## COMPLETE SPECIFICATION.

### Improvements in or relating to Wheels of Vehicles.

I, ARTHUR BENNETT TAYLOR, of 27A, Sydenham Hill, London, S.E. 26, late of Northover, Dartmouth Park Avenue, London, N.W. 5, British subject, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described

[Price 1/-]

and ascertained in and by the following statement:—

This invention relates to wheels of vehicles, and more particularly to wheels which are adapted to run either on rails or road or similar surfaces of the type having a rim formed in segments adapted

in one position to form a flange which projects beyond the tread when the wheel is to be used on rails, said rim being retracted or moved so as not to touch the surface of the road or similar surfaces.

A wheel of the type described made in accordance with this invention is characterised by a locking band adapted to clamp the segments in position.

Referring to the drawings filed with the provisional specification.

Fig. 1 is an elevation of one form of wheel made in accordance with this invention;

Fig. 2 is a section shewing the rim in a position when the wheel is for use on rails;

Fig. 3 is a section shewing the rim in a retracted position when the wheel is for use on a road surface.

Fig. 4 is a section of a modified construction shewing the rim in the position required to use the wheel on a road surface.

Referring to the drawings filed herewith.

Figs. 5 6, 7 and 8 are sections of two modified constructions each in two positions.

Figs. 9 and 10 illustrate diagrammatically the application of this invention to change of gauge in railways.

Referring to Figs. 1, 2 and 3, the wheel *a* is provided with a tread *b* of rubber or other suitable material; *c c*, *d d* are segments slotted at *c<sup>1</sup> c<sup>1</sup>*, *d<sup>1</sup> d<sup>1</sup>* (as shewn in Fig. 1) which form a flange; *e* is a locking band, and *f f* are bolts. When it is desired to retract the flange so as not to touch the road surface, the bolts *f f* are slackened, the segments *c c* are moved laterally so as to permit all the segments being moved inwardly, the bolts sliding in the slots *c<sup>1</sup> c<sup>1</sup>*, *d<sup>1</sup> d<sup>1</sup>*. When this has been done the bolts are tightened.

In the position shown in Fig. 2 the locking band *e* keeps the segments in the extended position.

In the form shewn in Fig. 4 the segments are hinged, alternate sections being hinged at a different distance from the centre of the wheel so as to permit their being moved to positions which will prevent their touching the road surface when used upon a road.

When it is desired to use the wheel on a rail, the segments are placed in a position to project and form a flange and are securely locked in position, by the locking band.

The projecting flange could be used on

sandy or other surfaces when additional adhesion is required and for that purpose the edge could be serrated or otherwise modified.

The locking band may be provided with a flange *g* turned inwards to keep the rim segments *c c*, *d d* in position and to protect these from damage dirt *etc.* when in the inner position. The ring segments may also be provided with a flange *h* as shown in Figs. 5 and 6. The segments may also be formed as in Figs. 7 and 8 with a flange *k* and the locking band may be formed with inner flange as shown in the figures.

By having four wheels on an axle as illustrated in Figs. 9 and 10 and either retracting or extending the flange *c* for respective gauges this invention may be applied to vehicles for use with railways of change of gauge.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. A wheel for vehicles of the type described characterised by a locking band adapted to clamp the segments in position, substantially as described.

2. A wheel according to Claim 1 characterised in that the said rim segments are slotted to allow of the passage of bolts when the segments are moved inward or outward.

3. A wheel according to Claim 1 characterised in that alternate segments of the rim are hinged to the wheel at a different distance from the centre for the purpose set forth.

4. A wheel according to Claim 1 characterised in that means is provided whereby the segments of the flange are retracted by first removing two of them laterally from the plane of the others so as to permit of the segments being moved inwardly.

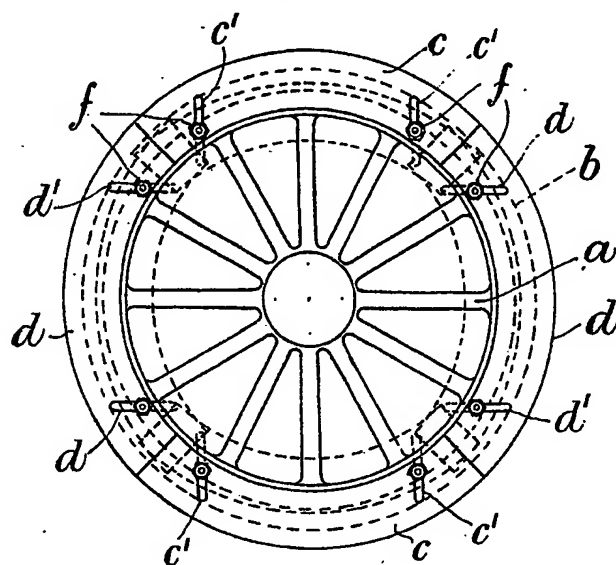
5. A wheel according to Claim 1 characterised in that the segments fit closely together when in the extended position.

6. A wheel according to Claim 1 constructed arranged and adapted for use substantially as described with reference to the drawings accompanying the provisional specification and the accompanying drawings.

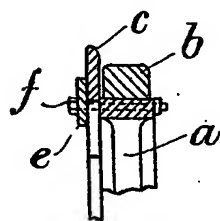
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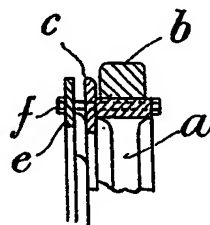
*Fig.1.*



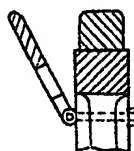
*Fig.2.*



*Fig.3.*



*Fig.4*



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Fig.5.

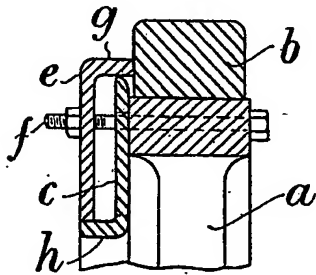


Fig.6.

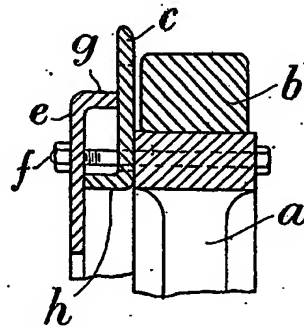


Fig.7.

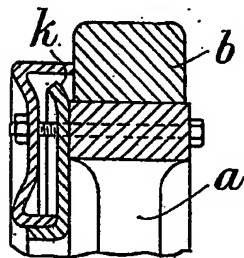


Fig.8.

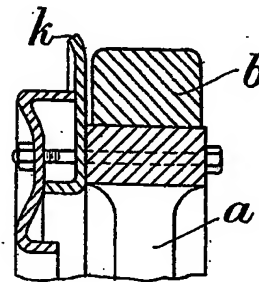


Fig.9.

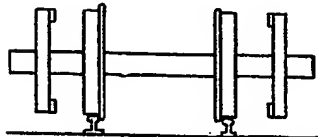
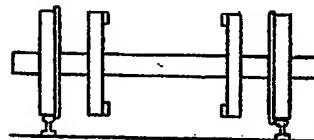


Fig.10.



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